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(57) Abstract: A fluidized bed reduction reactor has a plurality of fluidized bed reactors (10) with inner gas distributors (19). A charge duct (12) passes through the top of the fluidized bed reactor (10) with a free end to charge a fine iron ore into said reactor (10). The free end of the iron ore charging duct (12) is positioned close to the top center of the gas distributor (19). A spiral-shaped partition weir (13) is placed over the gas distributor and surrounds the iron ore charging duct (12) while being spirally extended to an inner wall of the fluidized bed reactor (10) where it is fixed. The fine iron ore is fluidized and reduced while spirally flowing from the center of the fluidized bed reactor (10) to its inner wall. In this structure, the back mixture phenomenon where the reacted fine iron ore is mixed with the non-reacted fine iron ore does not occur.